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### REMARKS

Claims 5, 9, 10, 21, 23, 31, 61, and 68 have been amended, no claims have been canceled or added. Claims 5-14, 16-18, 21-26, 31-33, 35-41, 61, 68, 69, and 71-79 are pending in the application. Applicants respectfully request reconsideration and allowance of the pending claims in view of the foregoing amendments and the following remarks.

#### Response to rejections under Sections 102

Claims 5-14, 16-18, 21-26, 31-33, 35-41, 61, 68, 69, and 71-79 stand rejected under 35 U.S.C. 102(b) as being anticipated by Romohr (USPN 5,596,723). For the reasons presented below, Applicants respectfully request the withdrawal of the Section 102 rejections.

#### Independent Claims 5, 21, 31, 61, and 68

The Examiner apparently reads Romohr's frame type as Applicants' virtual channel. Applicants have amended independent claims 5, 21, 31, 61, and 69 to clarify that a virtual channel being a communication link. As understood by those skilled in the art, a frame type is a format of the packet to be transmitted over the virtual channel. Applicants are willing to submit a Declaration evidencing this fact if the Examiner would find such a Declaration helpful.

Moreover, Rhomohr (USPN 5,596,723) discloses identifying the frame type by sending a plurality of inquiries using different frame types (e.g. abstract, Figure 3C). In contrast, Applicants claims generally recite identifying a valid virtual channel by sending a signal over a virtual channel. Additionally, Rhomohr discloses sending a frame type wherein Applicants claims generally recite sending a signal. Thus a frame type cannot be broadly reasonably interpreted as a virtual channel as the Examiner suggests.

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Independent Claims 5 and 61

The Examiner apparently reads Romohr as disclosing a protocol configuration without prompting a user for information that ... identifies ... the valid protocol. Applicants Respectfully disagree and submit that Romohr does prompt the user for information that identifies the valid protocol (see, e.g. Figure 4E). Not prompting the user for information is not a mere design choice but advantageously configures without user intervention. From the users point of view it is advantageous to not have to supply information for configuration. Additionally, a user doesn't typically have enough knowledge about the network to supply configuration information. Furthermore, from a system perspective it is advantageous to not have to provide an interface to a user for configuration purposes.

Response to rejections under Sections 103

Claims 6, 8-10, 22-24, 32, 69, and 78 stand rejected under 35 U.S.C. 102(a) as being unpatentable over Romohr (USPN 5,596,723). Claims 17, 40, and 71 stand rejected under 35 U.S.C. 102(a) as being unpatentable over Romohr in view of Marullo et al. (USPN 6,185,701).

For at least the reasons discussed in connection with the Section 102 rejections response, Applicants respectfully request the withdrawal of the 103 rejections for claims. In addition, dependent claims 6, 8, 9, 10, and 23 are patentable for the reasons discussed below.

Dependent claim 6

Dependent claim generally recites communicating ... a F5 Operations, Administration, and Maintenance (OAM) loopback signal ... to identify a valid protocol. In contrast, Romohr (USPN 5,596,723) discloses communicating a Ethernet (e.g. FIG 3D) or a

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Token Ring (e.g. FIG 3F) frame type to identify a Novell Netware protocol or a Banyan Vines protocol. Romohr does not teach or suggest to communicating a OAM loopback signal to identify a valid protocol.

Examiner asserts that it would have been obvious to include OAM signals to the system. However, Applicants respectfully disagree that it would be obvious to communicate an OAM loopback signal to automatically identify a protocol as the Examiner suggest since an OAM loopback signal is commonly used to test connectivity and not to identify a protocol.

Dependent claim 8

Dependent claim generally recites communicating ... a Dynamic Host Configuration Protocol (DHCP) request to automatically identify a protocol. In contrast, Romohr (USPN 5,596,723) discloses communicating a Ethernet (e.g. FIG 3D) or a Token Ring (e.g. FIG 3F) frame type to identify a Novell Netware protocol or a Banyan Vines protocol. Romohr does not teach or suggest communicating a DHCP request.

Examiner asserts that it would have been obvious to one of ordinary skill in the art to include DHCP in the protocol requests. However, Applicants respectfully disagree that it would be obvious to use DHCP to identify a protocol as the Examiner suggests since DHCP is typically used to automatically identify an Internet Address and not to identify a protocol.

Dependent claim 9

Applicants have amended claim 9 to recite automatically identifying at least one of a valid virtual channel and a valid protocol...comprises ...communicating ... a Dynamic Host Configuration Protocol request, a Link Control Protocol Configuration Packet, or a Point-

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to-Point over Ethernet (PPPoE) PADI packet and wherein the valid protocol comprises an Internet over ATM protocol. In contrast, Romohr (USPN 5,596,723) discloses communicating a Ethernet (e.g. FIG 3D) or a Token Ring (e.g. FIG 3F) frame type to identify a Novell Netware protocol or a Banyan Vines protocol. Romohr does not teach or suggest communicating a DHCP request, a Link Control Protocol Configuration Packet, or a PPPoE PADI packet to automatically identify an Internet over ATM protocol.

Examiner asserts that it would have been obvious to one of ordinary skill in the art to incorporate the Internet over ATM protocol to the system. However, Applicants respectfully disagree that it would be obvious to communicate a DHCP request, a Link Control Protocol Configuration Packet, or a PPPoE PADI packet to automatically identify an Internet over ATM protocol as suggested by the Examiner. DHCP is typically used to automatically identify an Internet Address and not to identify an Internet over ATM protocol. Link Control Protocol Configuration Packet is typically used to establish, configure and test a PPP link and not to identify an Internet over ATM protocol. PPPoE PADI packets are typically used for service information and not to identify an Internet over ATM protocol.

#### Dependent claim 10

Applicants have amended claim 9 to recite automatically identifying at least one of a valid virtual channel and a valid protocol...comprises ...communicating ... a Dynamic Host Configuration Protocol request, a Link Control Protocol Configuration Packet, or a Point-to-Point over Ethernet (PPPoE) PADI packet and wherein the valid protocol comprises Point-to-Point over Asynchronous Transfer Mode (PPPoA) protocol or a PPPoE. In contrast, Romohr (USPN 5,596,723) discloses communicating a Ethernet (e.g. FIG 3D) or

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Token Ring (e.g. FIG 3F) frame types to identify a Novell Netware protocol or a Banyan Vines protocol. Romohr does not teach or suggest communicating a DHCP request, a Link Control Protocol Configuration Packet, or a PPPoE PADI packet to automatically identify a PPPoA protocol or PPPoE protocol.

Examiner asserts that it would have been obvious to one of ordinary skill in the art to incorporate PPPoA protocol and PPPoE protocol to the system. However, Applicants respectfully disagree that it would be obvious to communicate a DHCP request, a Link Control Protocol Configuration Packet, or a PPPoE PADI packet to automatically identify an PPPoA protocol or a PPPoE protocol as suggested by the Examiner. DHCP is typically used to automatically identify Internet Address and not to identify a PPPoA protocol or a PPPoE protocol. Link Control Protocol Configuration Packet is typically used to establish, configure and test a PPP link and not to identify a PPPoA protocol or a PPPoE protocol. PPPoE PADI packets is typically used for service information and not to identify a PPPoA protocol or a PPPoE protocol.

Dependent claim 23

Applicants have amended claim 23 to recite ... automatically identifying at least one of a valid virtual channel and a valid protocol...communicating a ... a Domain Name Server (DNS) resolution request to test an Transmission Protocol layer of the network, the Transmission Protocol layer is a Transmission Control Protocol. In contrast, Romohr (USPN 5,596,723) discloses communicating a Ethernet (e.g. FIG 3D) or Token Ring (e.g. FIG 3F) frame types to identify a Novell Netware protocol or a Banyan Vines protocol. Romohr does not teach or suggest communicating a DNS request to test a Transmission Control Protocol.

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Examiner asserts that it would have been obvious to one of ordinary skill in the art to incorporate a DNS signal to the system. However, Applicants respectfully disagree that it would be obvious to communicate a DNS request to test a Transmission Control Protocol as suggested by the Examiner since DNS is typically used to identify a Internet Address of a server and not test a Transmission Control Protocol.

Seasonable challenge the Examiner's assertions of "well known" subject matter

Examiner asserts certain well known subject matter. Applicants respond as follows:

1. Examiner asserts that it is well known and that the Asynchronous Transfer Mode (ATM) networking standard includes various types of F5 Operations, Administration, and Maintenance (OAM) cells that carry OAM related information that are used in administrative and supervisory actions and would provide beneficial protocol to test for in the system. (office action mailed February 10, 2005, para 14 and office action mailed June 23, 2005 para 15).

In response, Applicants agree that that OAM is well known for use in administrative and supervisory actions, Applicants disagree that the sending an OAM message for the purpose of determining a protocol was generally known, let alone well known, at the time of the Applicants' invention.

2. Examiner asserts that it is well known that computers utilize DHCP requests in a network to determine network connectivity and to determine which addressing modes are used in the network (office action mailed June 23, 2005 para 16) .

In response, Applicants agree that that a DHCP request is well known for use in determining IP addresses, Applicants disagree that the sending a DHCP request for the purpose

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of determining a virtual circuit and/or a protocol was generally known, let alone well known, at the time of the Applicants' invention.

3. Examiner asserts that it is well known that Internet over ATM protocol is widely used in networks for its reliability and ability to allow multiple networks to communicate with one another. (office action mailed February 10, 2005, para 15 and office action mailed June 23, 2005 para 17).

In response, Applicants agree that that IP over ATM protocol is well known for being widely used in networks, Applicants disagree that the sending DHCP request, a Link Control Protocol Configuration Packet or a Point-to-Point Over Ethernet PADI packet protocol for the purpose of determining an IP over ATM protocol was generally known, let alone well known, at the time of the Applicants' invention.

4. Examiner asserts that it is well known that both Point-to-Point over ATM (PPPoA) and Point-to-Point over Ethernet (PPPoE) protocols are widely used in networks for its reliability and secure communications between computing systems (office action mailed February 10, 2005, para 16 and office action mailed June 23, 2005 para 18).

In response Applicants agree that that PPPoA and PPPoE protocols are well known for being widely used in networks, Applicants disagree that the sending DHCP request, a Link Control Protocol Configuration Packet or a Point-to-Point Over Ethernet PADI packet protocol for the purpose of determining a PPPoA protocol or a PPPoE protocol was generally known, let alone well known, at the time of the Applicants' invention.

5. Examiner asserts that it is well known that a DNS signal is used widely to test and determine if a network element is connected and able to determine their appropriate location and to what network service they are connected (when a network client is connected to a network the

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first time, it is routine that the computer locate the DNS server in order to configure itself with the network settings for such as name server IP address resolution, etc) (office action mailed February 10, 2005, para 19 and office action mailed June 23, 2005 para 20).

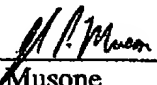
In response, Applicants agree that that a DNS signal is well known for use to get an IP address of a server, Applicants disagree that the sending DNS for the purpose of testing a Transmission Control Protocol was generally known, let alone well known, at the time of the Applicants' invention.

#### Conclusion

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, Applicants respectfully request that the Examiner reconsider the rejections and timely pass the application to allowance. Please grant any extensions of time required to enter this paper. The commissioner is hereby authorized to char any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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